ABSTRACT

In the realm of education, the role of a teacher or learning designer is pivotal in crafting a comprehensive and effective learning experience. To achieve this, the utilization of learning design models becomes an essential necessity. One widely recognized paradigm, especially in instructional contexts, is the ADDIE model. This research aims to assess the validity of an encyclopedia as a learning medium for the topic of eubacteria. Employing the ADDIE model with its five stages of Analysis, Design, Development, Implementation, the study was modified, concluding at the Development stage due to time and budget constraints. The results revealed a comprehensive validity assessment (average score of 91.2%) by three validators—language expert, content specialist, and media specialist—indicating the efficacy of the ADDIE model in eubacteria material development. Furthermore, antibacterial testing of robusta coffee leaf extract (Coffea canephora) was conducted using the true experimental laboratory method with a Randomized Complete Block Design (RCBD) comprising five treatments and three replications. Concentrations tested included control, 25%, 50%, and 75%, alongside positive control (chloramphenicol 1%) and negative control (DMSO 20%). The parameter observed was the inhibitory zone against Escherichia coli bacteria using ImageJ. Statistical analysis using SPSS version 26.00 through ANOVA at a 0.05 confidence level indicated a significant impact of coffee leaf extract on Escherichia coli, with an F value of 82.623 > F table 3.48. Duncan's test revealed significant similarities between the positive control and concentrations of 25%, 50%, and 75%.

Keywords: Encyclopedia Validity Test, Coffee Leaf Extract, Escherichia coli Bacteria